Outpatient Computed Tomography (CT) for Non-Emergency Cases Quick-Reference Guide

Spine

Intervertebral Disc Disease

• If you see disc mineralization on radiographs (typically the case with chondrodystrophic dogs), CT is a good imaging choice. It can distinguish between the IV disc and the spinal cord to reveal if there is disc herniation and cord compression.

• If disc mineralization is not present on radiographs, MRI is a better tool because CT cannot distinguish between the non-mineralized disc and the spinal cord.

CT is not ideal for neck evaluation.

Abdomen

Abdominal Masses

- Liver masses
- Adrenal tumors

CT with contrast is the best way to plan for surgical excision when ultrasound shows an adrenal tumor, because ultrasound is only 80% sensitive in determining vascular invasion (CT is 92% sensitive). If the CT shows that there is no invasion, then the pet is ready for surgery. And if an invasion is seen, then the tumor is aggressive and surgery will be less successful.

Portosystemic Shunts (PSS)

Portosystemic shunts are mostly found in young small-breed dogs with elevated ALT and bile acids of 100 or greater. (Note: If bile acids are less than 100, it is best to conduct a portal scintigraphy first to rule out a shunt.) CT portography provides a beautiful road map of the abdominal vasculature for the surgeon, helping to reduce anesthesia and surgical time since the surgeon will not have to search for the vessel.

We offer a comprehensive package that includes a portal scan to confirm or rule out a PSS followed by a CT for surgical planning (only if a shunt is present).

Chest

Screening for Metastases

CT can detect lung nodules as small as Imm, making this modality better than radiographs, which can only pick up those 5mm and larger. With CT, we can get a more accurate picture earlier in the disease process, and by using the latest imaging equipment we can now do so without anesthesia.

Thoracic Mass for Surgical Planning

If you see a mass on radiographs and the owners would like to proceed with surgery, CT can show the extent of the mass, whether or not it can be removed surgically, and if there are signs of metastases to the lungs and lymph nodes.

Nasal Passage

Chronic Nasal Discharge and/or Epistaxis

CT can accurately distinguish between nasal tumors, fungal rhinitis, chronic rhinitis, and foreign bodies. It is better for diagnosing patients with chronic nasal discharge and/or epistaxis than radiographs because no anesthesia is required and because skull radiographs are difficult to take and are not sensitive in detecting changes in the nasal passage (e.g. masses or bone lysis).

We offer a comprehensive package where a follow-up rhinoscopy with an internist for tissue sampling is performed after the CT.

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